GeoEngineering, Inc.
Consultants in Groundwater Control

100 Ford Rd. Denville, N.J. 07834 (201) 625 0700

July 17, 1987

L.E. Carpenter & Co.
Humboldt Industrial Park
Hazleton, PA 18201

ATTN: Frank Aron

SUBJ: 1986 Administrative Consent Order
April through June 1987 Progress Report

Gentlemen:

Per Paragraph 35 of the 1986 Administrative Consent Order between L.E. Carpenter & Company and the NJDEP, the following progress report is submitted detailing the status of activities at the L.E. Carpenter, Wharton facility.

AUTO-SKIMMER solvent recovery activities have continued at the site and are summarized as follows:

Skimmer Location	Period	Volume of Solvent Removed
Well 10	4/01-4/30	.1 gallons
Well 10	5/01-5/31	0 gallons
Well 10	6/01-6/30	0 gallons
	Quarter Total	.1 gallons
	Operation Total	3851.5 gallons

Attached are figures depicting piezometric water level contours, the top of floating product elevation and isopach of product thickness for the months of April, May and June 1987. A summary table for elevations of groundwater and floating product and for product thickness precedes each month's figures.

On June 8, 1987, groundwater samples were collected at the five designated monitor wells. A new laboratory, Enseco-Erco Laboratory of Cambridge, Massachusetts, was contracted for the analytical work. The test results and laboratory QA/QC documentation are attached.

As of April 16, problems preventing the collection of product in the final one-third (March) of the previous quarter had been rectified and the AUTO-SKIMMER was collecting floating product. However, the oil-water separator tank was subsequently found to have a leak and operations were suspended until the tank could be repaired and reinstalled. It is expected that AUTO-

SKIMMER operations will resume between the middle and end of July.

On May 21, 1987, GeoEngineering met with NJDEP representatives to discuss previously submitted revisions to the Remedial Investigation Work Plan. Presently, the revisions are still under NJDEP review.

On June 22, 1987, GeoEngineering submitted a proposal to L.E. Carpenter suggesting the cessation of AUTO-SKIMMER operations and the installation of a multi-point skimming, groundwater depression, product recovery system. The NJDEP also received a copy of the proposal. As of this writing, the proposal is under consideration.

Should you have any questions or comments, we are available for discussion at your convenience.

Sincerely,

GEOENGINEERING, INC.

William W. Dunnell IV
Project Manager

WWD/avm
Enclosure
cc T. Schwartz (5)
T. Kaylor w/o encl.

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: GeoEngineering, Inc.
Client ID: MW-1
Laboratory ID: 87-007836
Matrix: Water Sampled: 06/08/87 Received: 06/09/87
Authorized: 06/09/87 Prepared: 06/17/87 Analyzed: 06/17/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	5,000
Bromomethane	ND	µg/L	5,000
Vinyl chloride	ND	µg/L	5,000
Chloroethane	ND	µg/L	5,000
Methylene chloride	16,000B	µg/L	5,000
Acetone	11,000*B	µg/L	50,000
Carbon disulfide	ND	µg/L	2,000
1,1-Dichloroethene	ND	µg/L	2,000
1,1-Dichloroethane	ND	µg/L	2,000
trans-1,2-Dichloroethene	ND	µg/L	2,000
Chloroform	ND	µg/L	2,000
1,2-Dichloroethane	ND	µg/L	2,000
2-Butanone	ND	µg/L	10,000
1,1,1-Trichloroethane	ND	µg/L	2,000
Carbon tetrachloride	ND	µg/L	2,000
Vinyl acetate	ND	µg/L	10,000
Bromodichloromethane	ND	µg/L	2,000
1,2-Dichloropropane	ND	µg/L	2,000
trans-1,3-Dichloropropene	ND	µg/L	2,000
Trichloroethene	1,300*B	µg/L	2,000
Dibromochloromethane	ND	µg/L	2,000
1,1,2-Trichloroethane	ND	µg/L	2,000
Benzene	ND	µg/L	2,000
cis-1,3-Dichloropropene	ND	µg/L	2,000
2-Chloroethyl vinyl ether	ND	µg/L	10,000
Bromoform	ND	µg/L	2,000
4-Methyl-2-pentanone	ND	µg/L	10,000
2-Hexanone	ND	µg/L	10,000
1,1,2,2-Tetrachloroethane	ND	µg/L	2,000
Tetrachloroethene	ND	µg/L	2,000
Toluene	ND	µg/L	2,000
Chlorobenzene	ND	µg/L	2,000
Ethyl benzene	6,700	µg/L	2,000
Styrene	ND	µg/L	2,000
Total xylenes	39,000	µg/L	2,000

ND = Not detected.
*Trace concentrations detected below the reporting limit.

Reported by AT Approved by

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: GeoEngineering, Inc.
Client ID: MW-2
Laboratory ID: 87-007837
Matrix: Water Sampled: 06/08/87 Received: 06/09/87
Authorized: 06/09/87 Prepared: 06/17/87 Analyzed: 06/17/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	500
Bromomethane	ND	µg/L	500
Vinyl chloride	ND	µg/L	500
Chloroethane	ND	µg/L	500
Methylene chloride	3,900B	µg/L	500
Acetone	2,400*B	µg/L	5,000
Carbon disulfide	ND	µg/L	200
1,1-Dichloroethene	ND	µg/L	200
1,1-Dichloroethane	ND	µg/L	200
trans-1,2-Dichloroethene	ND	µg/L	200
Chloroform	ND	µg/L	200
1,2-Dichloroethane	ND	µg/L	200
2-Butanone	ND	µg/L	1,000
1,1,1-Trichloroethane	ND	µg/L	200
Carbon tetrachloride	ND	µg/L	200
Vinyl acetate	ND	µg/L	1,000
Bromodichloromethane	ND	µg/L	200
1,2-Dichloropropane	ND	µg/L	200
trans-1,3-Dichloropropene	ND	µg/L	200
Trichloroethene	150*B	µg/L	200
Dibromochloromethane	ND	µg/L	200
1,1,2-Trichloroethane	ND	µg/L	200
Benzene	ND	µg/L	200
cis-1,3-Dichloropropene	ND	µg/L	200
2-Chloroethyl vinyl ether	ND	µg/L	1,000
Bromoform	ND	µg/L	200
4-Methyl-2-pentanone	ND	µg/L	1,000
2-Hexanone	ND	µg/L	1,000
1,1,2,2-Tetrachloroethane	ND	µg/L	200
Tetrachloroethene	ND	µg/L	200
Toluene	ND	µg/L	200
Chlorobenzene	ND	µg/L	200
Ethyl benzene	740	µg/L	200
Styrene	ND	µg/L	200
Total xylenes	9,500	µg/L	200

ND = Not detected.
*Trace concentrations detected below the reporting limit.

Reported by _____ Approved by _____

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: GeoEngineering, Inc.
Client ID: MW-3
Laboratory ID: 87-007838
Matrix: Water Sampled: 06/08/87 Received: 06/09/87
Authorized: 06/09/87 Prepared: 06/17/87 Analyzed: 06/17/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	500
Bromomethane	ND	µg/L	500
Vinyl chloride	ND	µg/L	500
Chloroethane	ND	µg/L	500
Methylene chloride	7,000B	µg/L	500
Acetone	ND	µg/L	5,000
Carbon disulfide	ND	µg/L	200
1,1-Dichloroethene	ND	µg/L	200
1,1-Dichloroethane	ND	µg/L	200
trans-1,2-Dichloroethene	ND	µg/L	200
Chloroform	ND	µg/L	200
1,2-Dichloroethane	ND	µg/L	200
2-Butanone	ND	µg/L	1,000
1,1,1-Trichloroethane	ND	µg/L	200
Carbon tetrachloride	ND	µg/L	200
Vinyl acetate	ND	µg/L	1,000
Bromodichloromethane	ND	µg/L	200
1,2-Dichloropropane	ND	µg/L	200
trans-1,3-Dichloropropene	ND	µg/L	200
Trichloroethene	130*	µg/L	200
Dibromochloromethane	ND	µg/L	200
1,1,2-Trichloroethane	ND	µg/L	200
Benzene	ND	µg/L	200
cis-1,3-Dichloropropene	ND	µg/L	200
2-Chloroethyl vinyl ether	ND	µg/L	1,000
Bromoform	ND	µg/L	200
4-Methyl-2-pentanone	ND	µg/L	1,000
2-Hexanone	ND	µg/L	1,000
1,1,2,2-Tetrachloroethane	ND	µg/L	200
Tetrachloroethene	ND	µg/L	200
Toluene	ND	µg/L	200
Chlorobenzene	ND	µg/L	200
Ethyl benzene	7,800	µg/L	200
Styrene	ND	µg/L	200
Total xylenes	47,000	µg/L	200

ND = Not detected.
*Trace concentrations detected below the reporting limit.

Reported by _____ Approved by _____

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: GeoEngineering, Inc.
Client ID: MW-4
Laboratory ID: 87-007839
Matrix: Water Sampled: 06/08/87 Received: 06/09/87
Authorized: 06/09/87 Prepared: 06/17/87 Analyzed: 06/17/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	260B	µg/L	5
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	1.3*	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	8.8	µg/L	2

ND = Not detected.
*Trace concentrations detected below the reporting limit.

Reported by _____ Approved by _____

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: GeoEngineering, Inc.
Client ID: MW-5
Laboratory ID: 87-007840
Matrix: Water Sampled: 06/08/87 Received: 06/09/87
Authorized: 06/09/87 Prepared: 06/17/87 Analyzed: 06/17/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	130B	µg/L	5
Acetone	2.7*B	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	1.4*	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.
*Trace concentrations detected below the reporting limit.

Reported by _____ Approved by _____

Table A

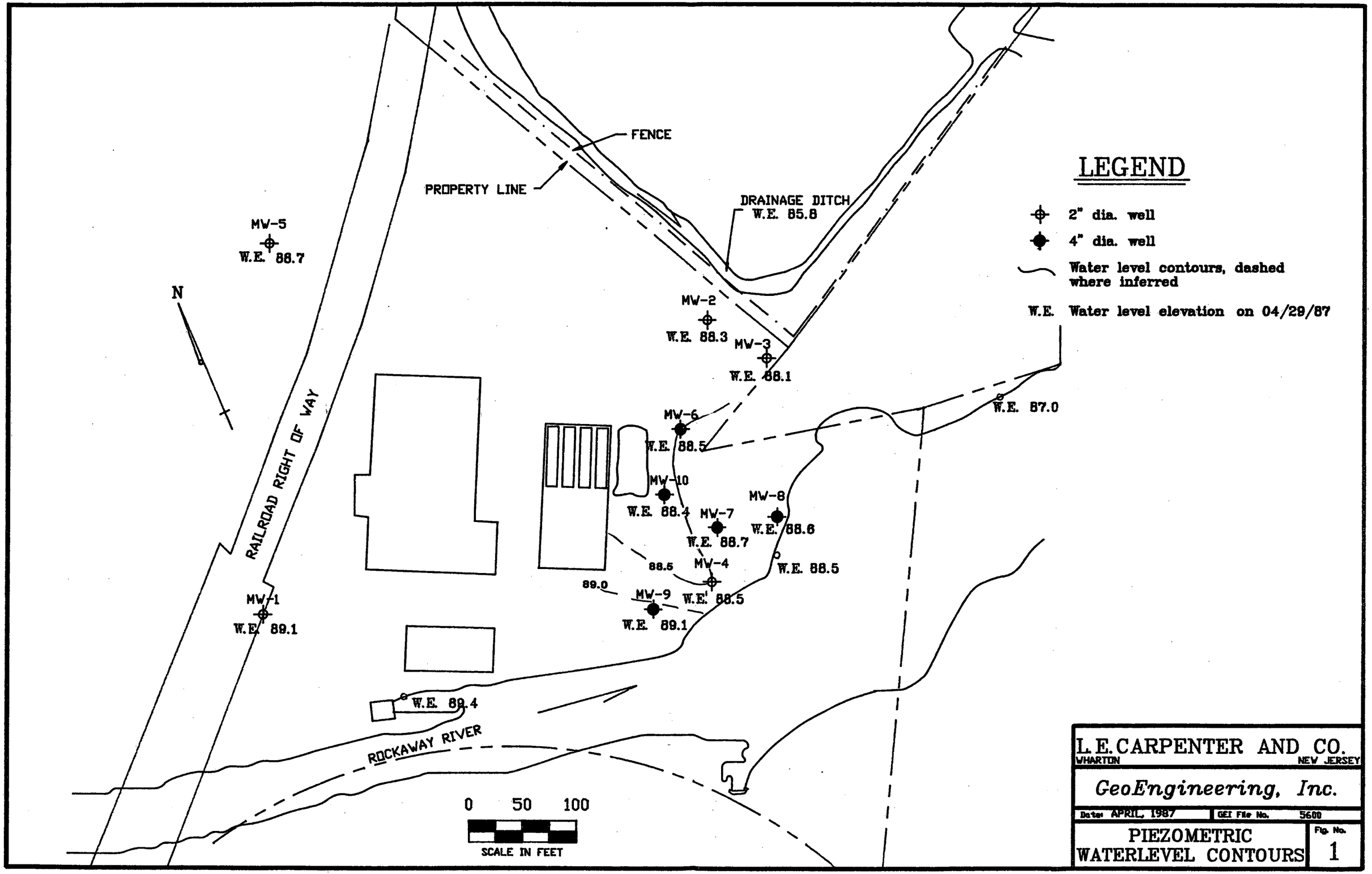
Solvent Thickness and Piezometric Elevations

on 04/29/87

Well No.	Piezometric Surface Elevation	Floating Solvent Elevation	Measured Solvent (MW) Thickness (ft.)	Calculated Solvent Thickness in Soil
1	89.1 (1)	89.5	1.95	0.32
2	88.3 (1)	88.4	0.01	< 0.01
3	88.1 (1)	88.5	0.93	0.15
4	88.5 (1)	88.8	0.05	< 0.01
5	88.7 (1)	no solvent	0.00	0.00
6	88.5 (2)	88.9	2.88	0.47
7	88.7 (2)	88.8	0.53	0.09
8	88.6	no solvent	0.00	0.00
9	89.1	no solvent	0.00	0.00
10	88.4 (2)	88.5	0.37	0.06
DRAINAGE CHANNEL	85.8			
RIVER PT. 1	89.4			
PT. 2	88.5			
PT. 3	87.0			

(1) Depth to water measured inside the GEOMON Groundwater Sampler/Piezometer (inlet screen is below solvent level)

(2) Calculated piezometric surface, assuming solvent S.G.= 0.87



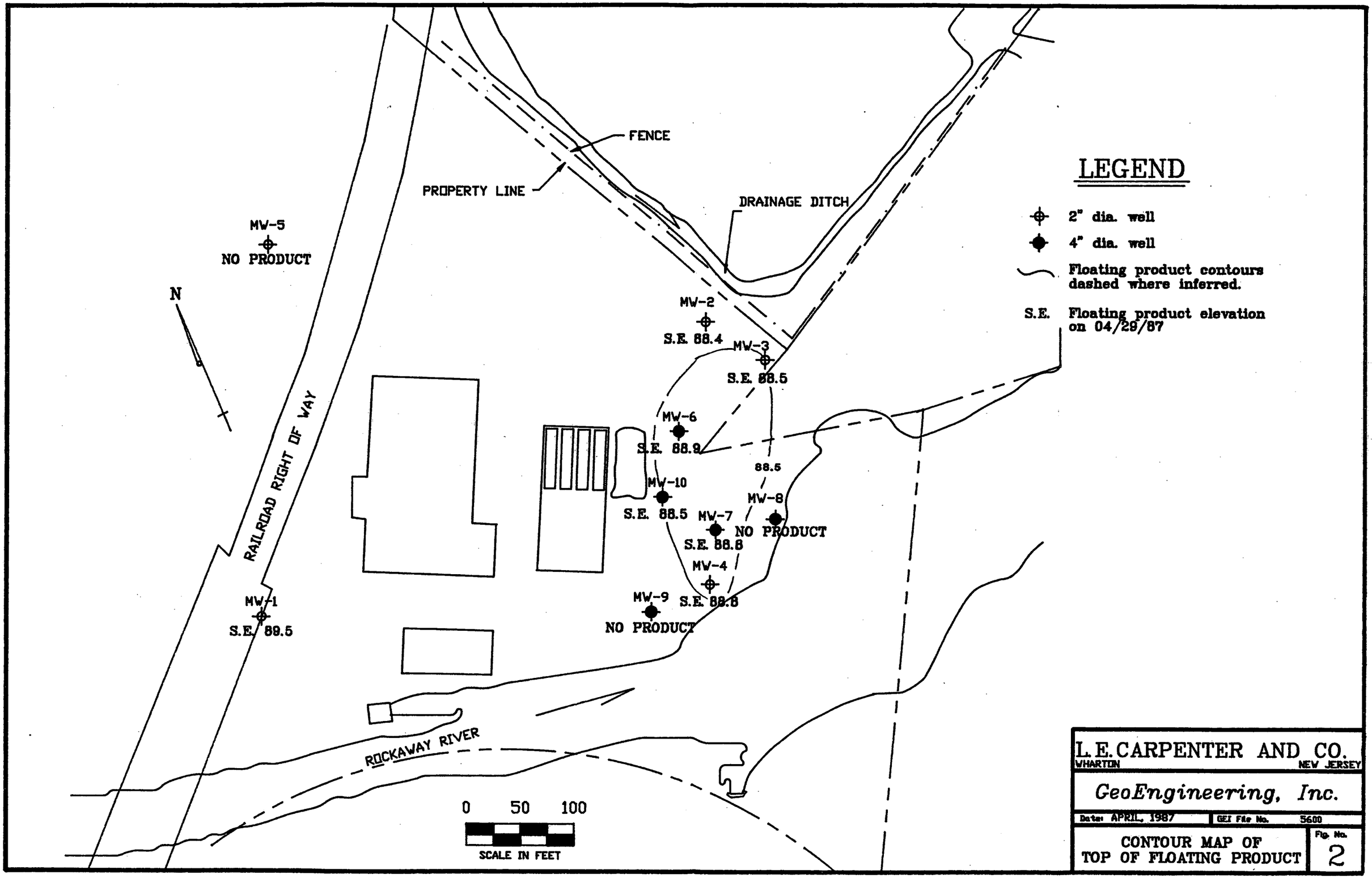
L. E. CARPENTER AND CO.
WHARTON NEW JERSEY

GeoEngineering, Inc.

Date: APRIL, 1987 | GEI File No. 5600

PIEZOMETRIC WATERLEVEL CONTOURS

Fig. No. 1


FENCE
PROPERTY LINE
DRAINAGE DITCH
MW-5
NO PRODUCT
N
MW-2
S.E. 88.4
MW-3
S.E. 88.5
MW-6
S.E. 88.9
88.5
MW-10
S.E. 88.5
MW-8
MW-7
NO PRODUCT
S.E. 88.8
MW-4
MW-9 S.E. 88.8
NO PRODUCT
MW-1
S.E. 89.5
RAILROAD RIGHT OF WAY
ROCKAWAY RIVER
0 50 100
SCALE IN FEET
LEGEND
2" dia. well
4" dia. well
Floating product contours dashed where inferred.
S.E. Floating product elevation on 04/29/87
L.E. CARPENTER AND CO.
WHARTON NEW JERSEY
GeoEngineering, Inc.
Date: APRIL, 1987
GEI File No. 5600
CONTOUR MAP OF TOP OF FLOATING PRODUCT
Fig. No. 2

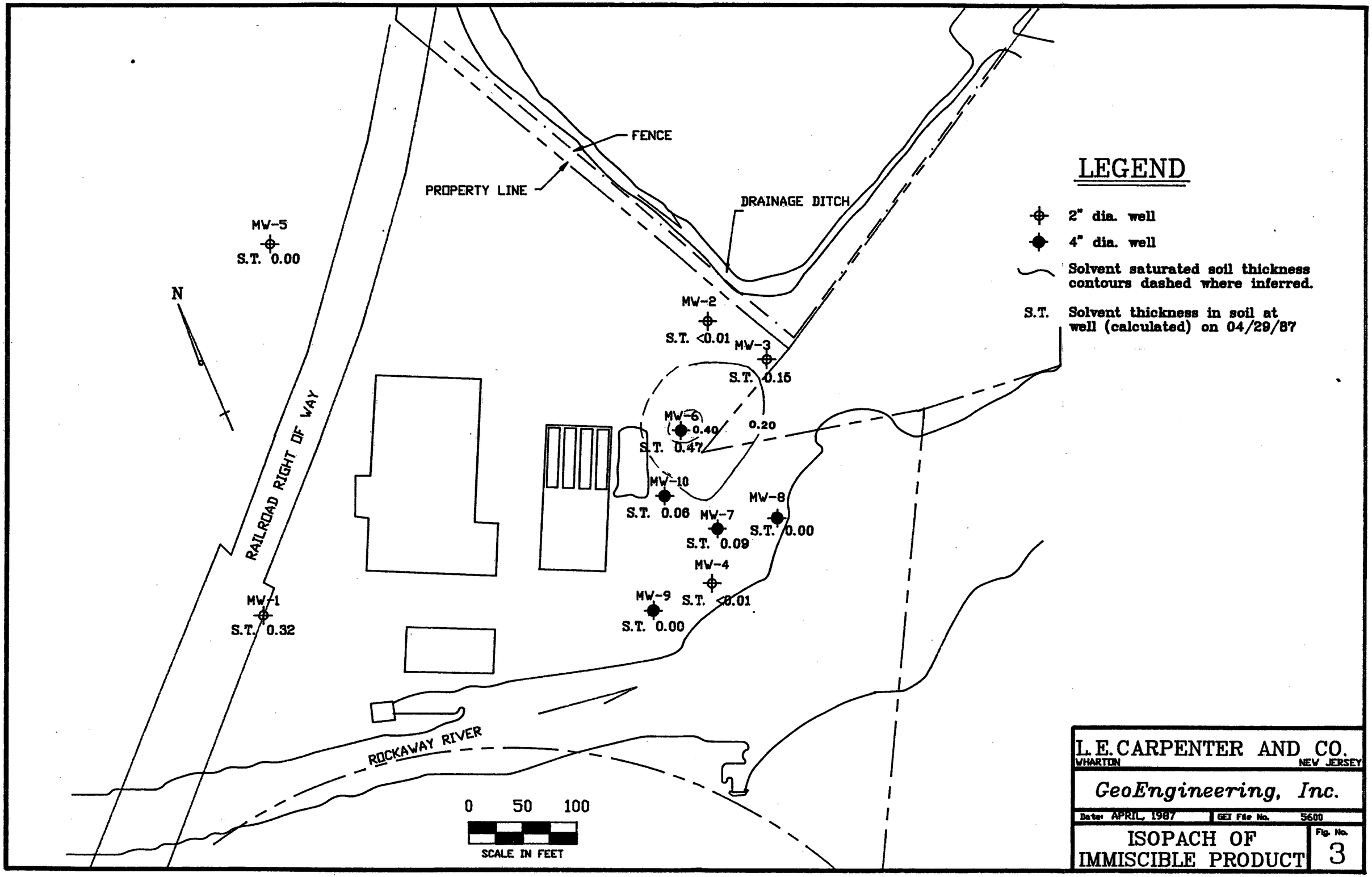

FENCE
PROPERTY LINE
DRAINAGE DITCH
MW-5
S.T. 0.00
N
MW-2
S.T. <0.01
MW-3
S.T. 0.15
MW-6
0.40
S.T. 0.47
0.20
MW-10
S.T. 0.06
MW-8
MW-7
S.T. 0.09
S.T. 0.00
MW-4
MW-9
S.T. <0.01
S.T. 0.00
MW-1
S.T. 0.32
RAILROAD RIGHT OF WAY
ROCKAWAY RIVER
0 50 100
SCALE IN FEET
LEGEND
2" dia. well
4" dia. well
Solvent saturated soil thickness contours dashed where inferred.
S.T. Solvent thickness in soil at well (calculated) on 04/29/87
L. E. CARPENTER AND CO.
WHARTON NEW JERSEY
GeoEngineering, Inc.
Date APRIL, 1987
GEI File No. 5600
ISOPACH OF IMMISCIBLE PRODUCT
Fig. No. 3

Table A

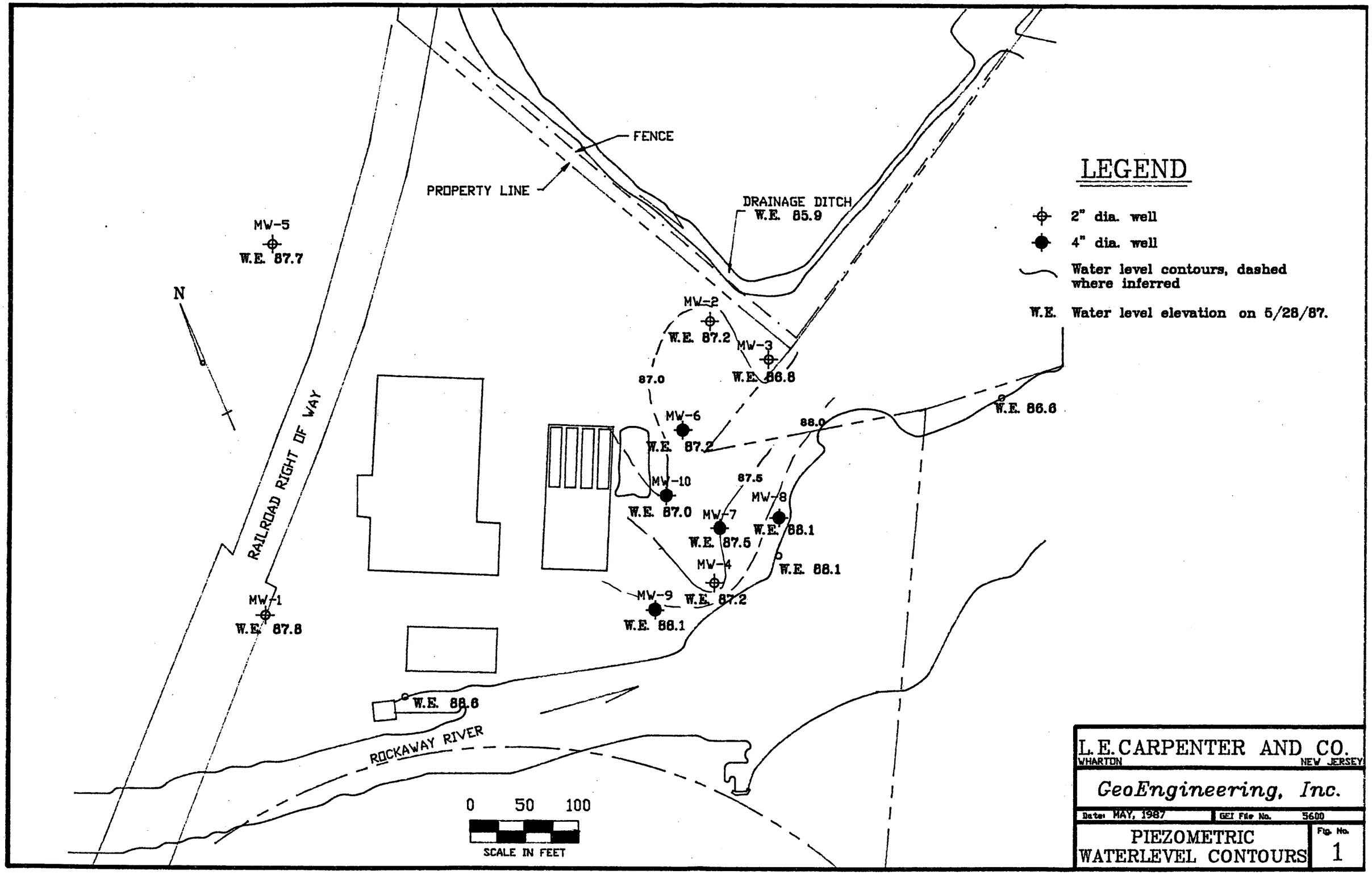
Solvent Thickness and Piezometric Elevations

05/28/87

Well No.	Piezometric Surface Elevation	Floating Solvent Elevation	Measured Solvent (MW) Thickness (ft.)	Calculated Solvent Thickness in Soil
1	87.8 (1)	88.1	1.71	0.28
2	87.2 (1)	87.3	0.04	< 0.01
3	86.8 (1)	87.5	2.32	0.38
4	87.2 (1)	87.5	0.25	0.04
5	87.7 (1)	no solvent	0.00	0.00
6	87.2 (2)	87.8	3.81	0.62
7	87.5 (2)	87.6	0.56	0.09
8	88.1	no solvent	0.00	0.00
9	88.1	no solvent	0.00	0.00
10	87.0 (2)	87.4	2.45	0.40
DRAINAGE CHANNEL	85.8			
RIVER PT. 1	88.6			
PT. 2	88.1			
PT. 3	86.6			

(1) Depth to water measured inside the GEOMON Groundwater Sampler/Piezometer (inlet screen is below solvent level)

(2) Calculated piezometric surface, assuming solvent S.G.= 0.87



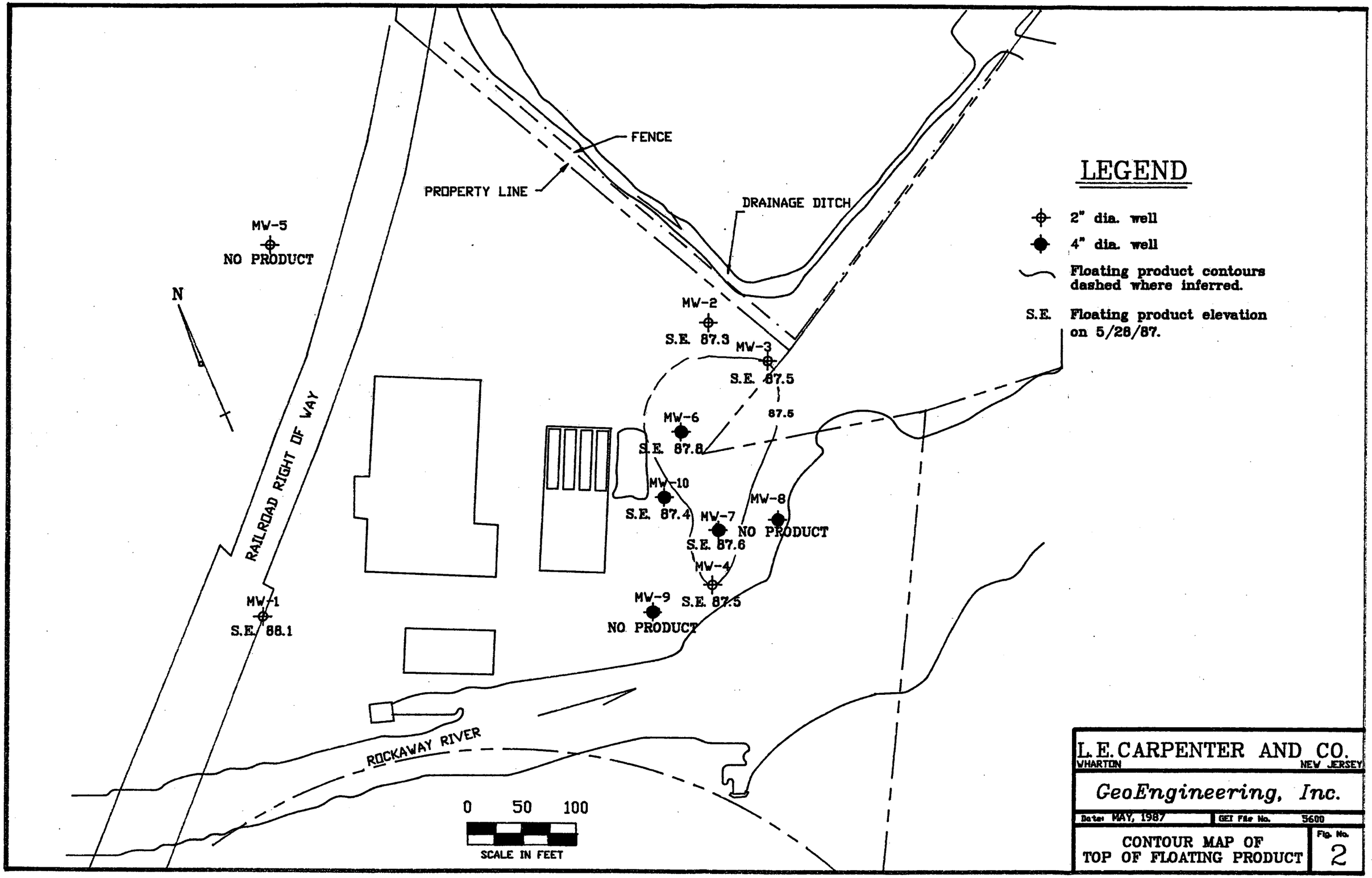
L.E.CARPENTER AND CO.
WHARTON NEW JERSEY

GeoEngineering, Inc.

Date: MAY, 1987 | GEI File No. 5600

PIEZOMETRIC WATERLEVEL CONTOURS

Fig. No. 1



L.E. CARPENTER AND CO.
WHARTON NEW JERSEY

GeoEngineering, Inc.

Date: MAY, 1987 | GEI File No. 5600

CONTOUR MAP OF TOP OF FLOATING PRODUCT

Fig. No. 2

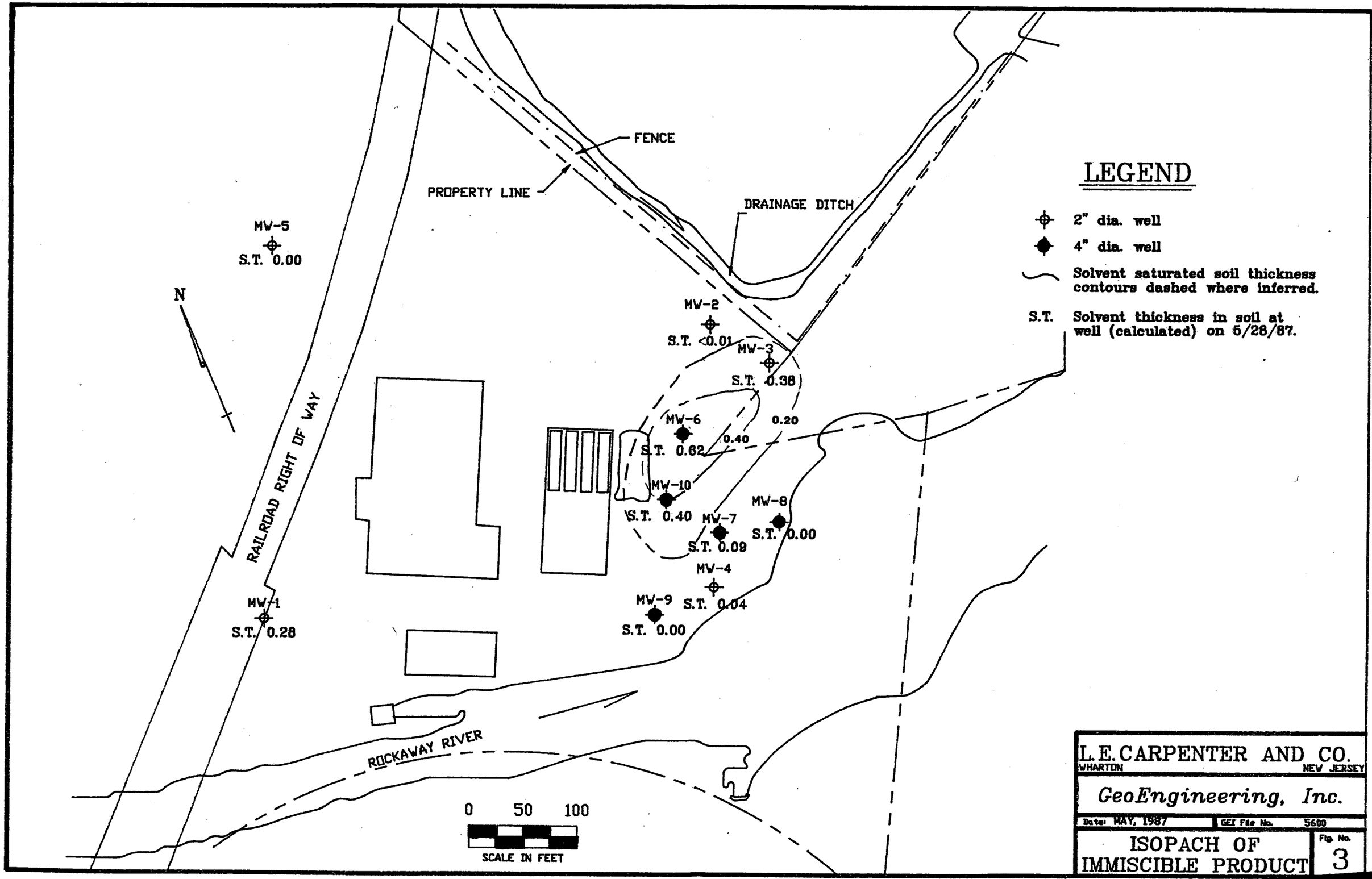

FENCE
PROPERTY LINE
DRAINAGE DITCH
MW-5
S.T. 0.00
N
MW-2
S.T. <0.01
MW-3
S.T. 0.38
MW-6
0.20
0.40
S.T. 0.62
MW-10
S.T. 0.40
MW-8
MW-7
S.T. 0.09
S.T. 0.00
MW-4
MW-9
S.T. 0.04
S.T. 0.00
MW-1
S.T. 0.28
RAILROAD RIGHT OF WAY
ROCKAWAY RIVER
0 50 100
SCALE IN FEET
LEGEND
2" dia. well
4" dia. well
Solvent saturated soil thickness contours dashed where inferred.
S.T. Solvent thickness in soil at well (calculated) on 5/28/87.
L.E.CARPENTER AND CO.
WHARTON NEW JERSEY
GeoEngineering, Inc.
Date: MAY, 1987
GEI File No. 5600
ISOPACH OF IMMISCIBLE PRODUCT
Fig. No. 3

Table A

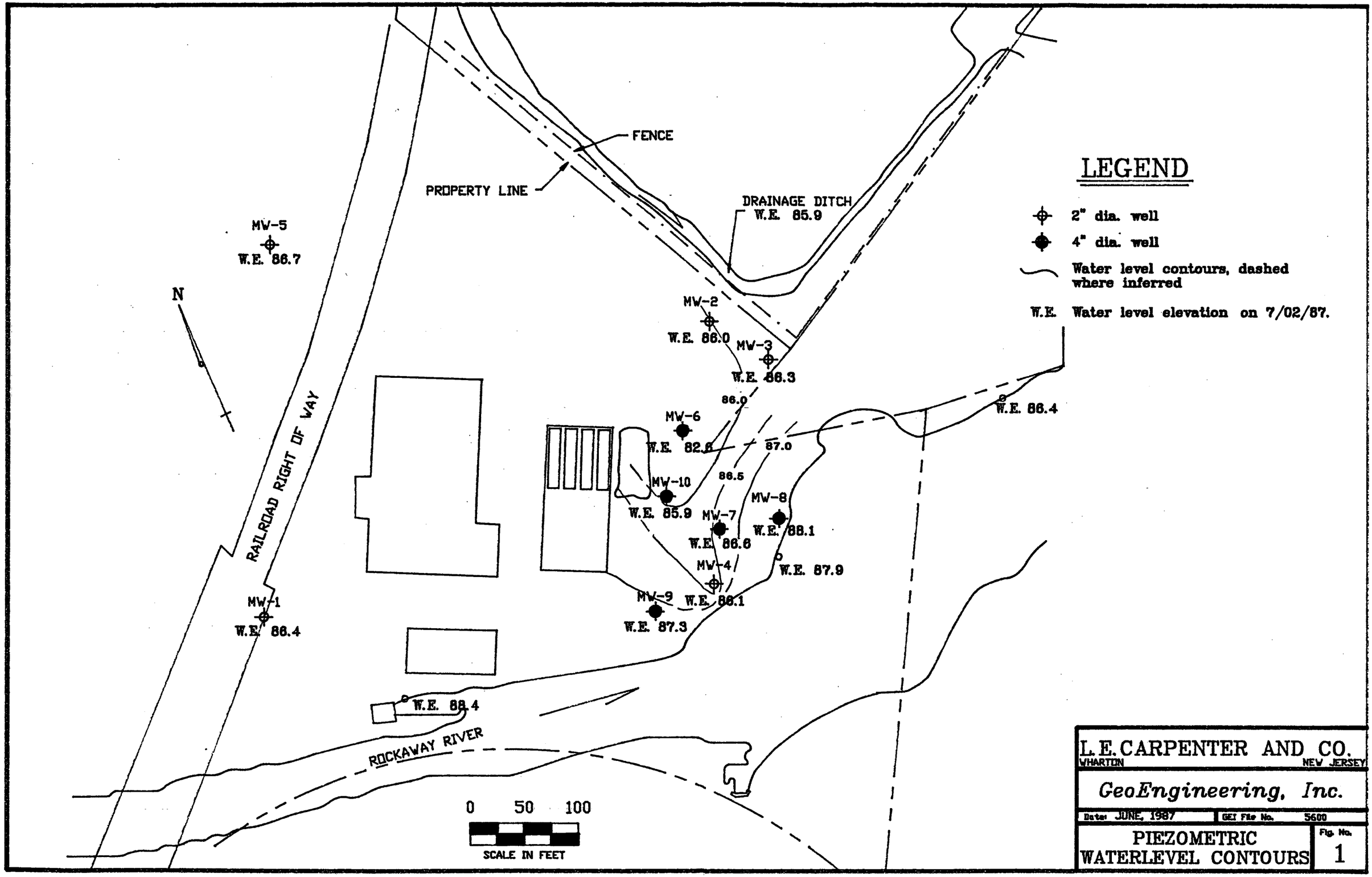
Solvent Thickness and Piezometric Elevations

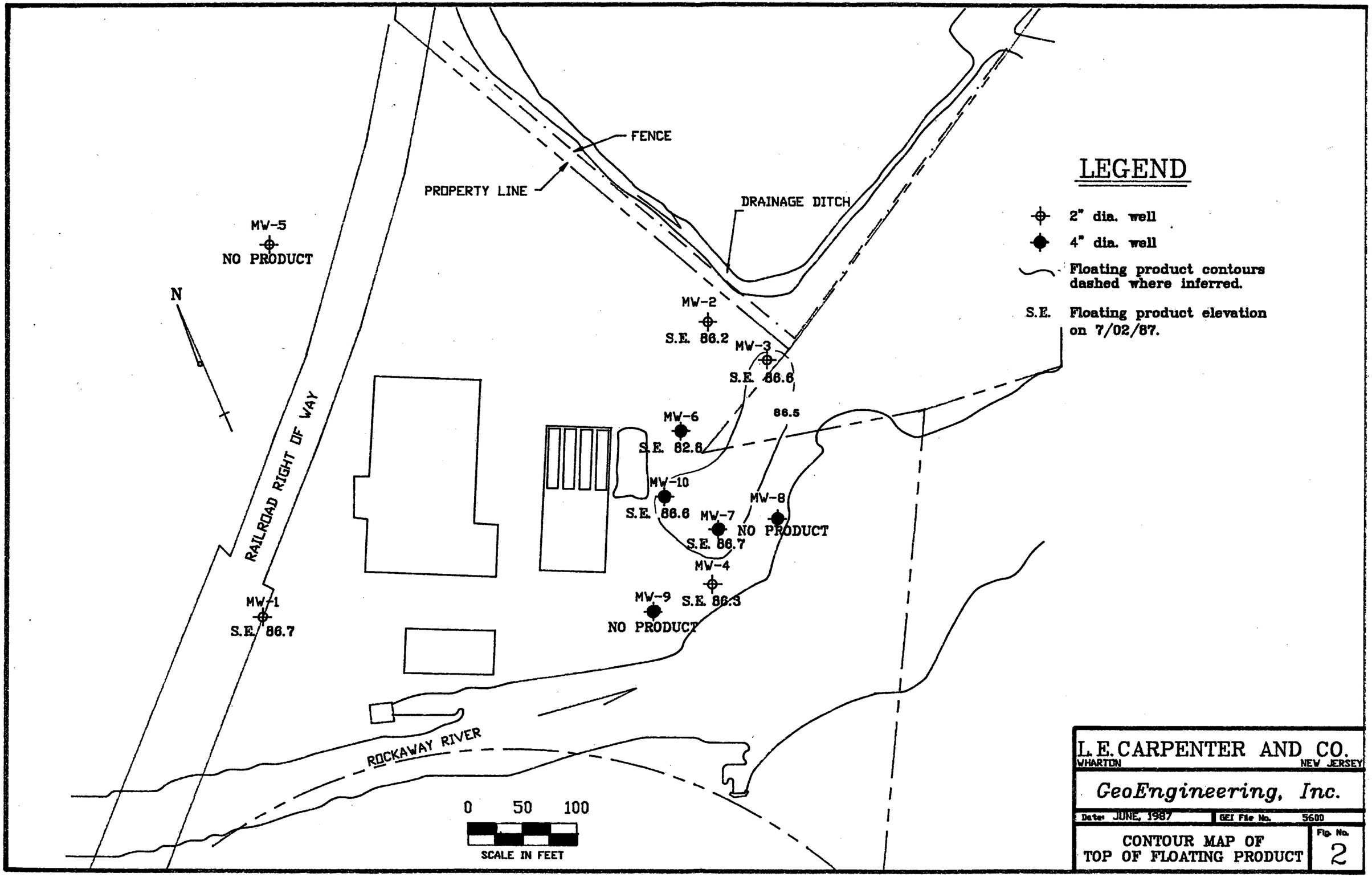
07/02/87

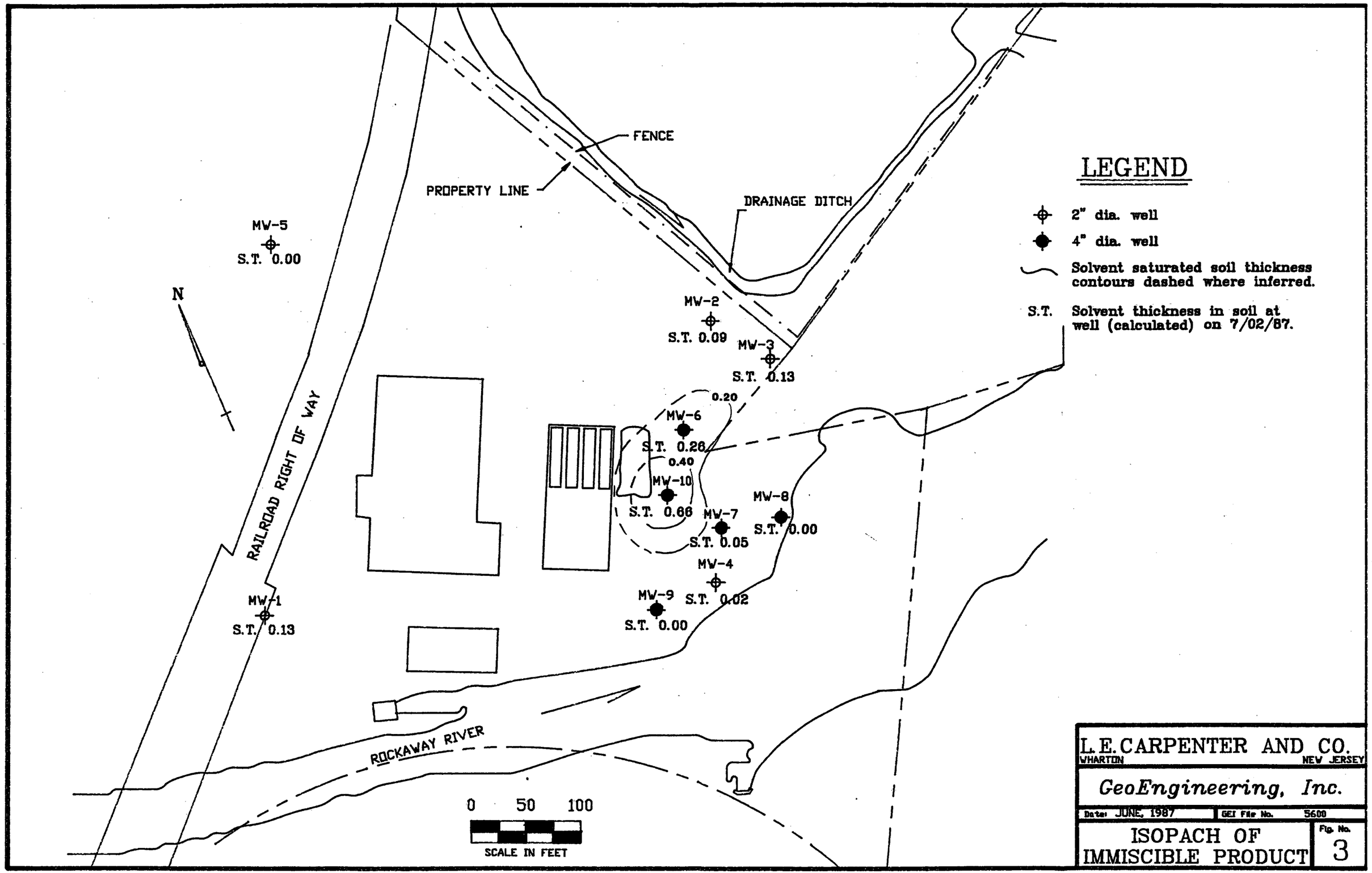
Well No.	Piezometric Surface Elevation	Floating Solvent Elevation	Measured Solvent (MW) Thickness (ft.)	Calculated Solvent Thickness in Soil
1	86.4 (1)	86.7	0.77	0.13
2	86.0 (1)	86.2	0.53	0.09
3	86.3 (1)	86.6	0.82	0.13
4	86.1 (1)	86.3	0.10	0.02
5	86.6 (1)	no solvent	0.00	0.00
6	82.6 (2)	82.8	1.60	0.26
7	86.6 (2)	86.7	0.29	0.05
8	88.1	no solvent	0.00	0.00
9	87.3	no solvent	0.00	0.00
10	85.9 (2)	86.6	4.05	0.66
DRAINAGE CHANNEL	85.7			
RIVER PT. 1	88.4			
PT. 2	87.9			
PT. 3	86.4			

(1) Depth to water measured inside the GEOMON Groundwater Sampler/Piezometer (inlet screen is below solvent level)

(2) Calculated piezometric surface, assuming solvent S.G.= 0.87


FENCE
PROPERTY LINE
DRAINAGE DITCH
W.E. 85.9
MW-5
W.E. 86.7
N
MW-2
W.E. 86.0
MW-3
W.E. 86.3
86.0
MW-6
W.E. 82.6
87.0
W.E. 86.4
MW-10
W.E. 85.9
86.5
MW-8
W.E. 88.1
MW-7
W.E. 86.6
MW-4
W.E. 87.9
MW-9
W.E. 88.1
W.E. 87.3
MW-1
W.E. 86.4
RAILROAD RIGHT OF WAY
W.E. 88.4
ROCKAWAY RIVER
0 50 100
SCALE IN FEET
LEGEND
2" dia. well
4" dia. well
Water level contours, dashed where inferred
W.E. Water level elevation on 7/02/87.
L.E.CARPENTER AND CO.
WHARTON NEW JERSEY
GeoEngineering, Inc.
Date JUNE, 1987
GEI File No. 5600
PIEZOMETRIC WATERLEVEL CONTOURS
Fig. No. 1


FENCE
PROPERTY LINE
DRAINAGE DITCH
MW-5
NO PRODUCT
N
MW-2
S.E. 86.2
MW-3
S.E. 86.6
86.5
MW-6
S.E. 82.6
MW-10
S.E. 86.6
MW-8
MW-7
NO PRODUCT
S.E. 86.7
MW-4
MW-9
S.E. 86.3
NO PRODUCT
MW-1
S.E. 86.7
RAILROAD RIGHT OF WAY
ROCKAWAY RIVER
0 50 100
SCALE IN FEET
LEGEND
2" dia. well
4" dia. well
Floating product contours dashed where inferred.
S.E. Floating product elevation on 7/02/87.
L.E.CARPENTER AND CO.
WHARTON NEW JERSEY
GeoEngineering, Inc.
Date: JUNE, 1987
GEI File No. 5600
CONTOUR MAP OF TOP OF FLOATING PRODUCT
Fig. No. 2



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ISOPACH OF IMMISCIBLE PRODUCT

Fig. No. 3